

Computing Infrastructure – Minos 2009/09

- Downtime schedule – 3rd Thur monthly
- Dcache upgrades and instability
- Condor / Grid status
- Bluearc performance – cpn lock program
- Parrot status – moving AFS to Bluearc
- Nucomp and GPCF futures
- Servicedesk issues
- Imap password changes Sep 15
- kcron fun and games after Aug 20 reboots
- Hardware plans

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DOWNTIMES

- FEF has scheduled reboots of all Minos servers
 - third Thursday of every month (17 Sep 2009)
 - <http://sites.google.com/a/fnal.gov/cd-scheduled-downtimes/>
- This is a lot of work for us, in spite of automation
 - crontab entries can be @reboot ...
 - Manual shutdown/restart of
 - mcimport
 - predator (raw data SAM declares)
- We have objected, at all levels, to no effect.

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DCache issues

- Dcache software upgrades July 27
 - Many service instabilities, due to base OS update
 - Continuing through this afternoon
 - We have lost at least 2 weeks of production
 - Still cleaning up the lost and undeclared files
- dcap 1.9.4 a.k.a. v2_42_f0908
 - allows direct access with recent releases

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Hardware plans

- Cluster replacements are ordered – a few TB local disk
- FY10
 - Replace remaining older servers (sam02/3, etc)
 - Add 30 TB Bluearc to /minos/data
 - Add 30 TB to Dcache (shift from Bluearc)

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Condor/Grid status

- Ryan Patterson managing condor
- We reached 1900 jobs running (mostly on CDF)
 - still want 5000, after fixing bluearc issues
- Still using wrapper for condor_rm, condor_hold
 - To prevent SAZ authentication overload
 - Condor 7.3 upgrade will fix this internally

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Bluearc performance

- d0ora2 was primary cause of problems
 - Scheduled 18:00 Sat/Sun/Tue/Thu
 - special hardware and software, misconfigured
 - resolved Jun 25 to Jul 13, then returned.
 - retired, upgraded to d0ora3 on Aug 25
- LOCKING - /grid/fermiapp/minos/scripts/cpn
 - Allows 'n' copies, presently 5, polls more aggressively
 - The old cp1 has locked 305145 times so far
 - should we ln -s cp1 cpn ?
 - Steve Cavanaugh has suggestions for reducing polling (sockets)

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Bluearc performance

- Shifting D0 to separate disks now – they are causing sustained overloads
- Will shift Minos to separate disks later this year
- See monitoring plots, such as
 - <http://www-numi.fnal.gov/computing/dh/bluearc/rates/minos27/NOW.png> - current day
 - <http://www-numi.fnal.gov/computing/dh/bluearc/rates/minos27/WEEK.png> - current week
 - <http://www-numi.fnal.gov/computing/dh/bluearc/rates/minos27/> - historical
 - <http://www-numi.fnal.gov/computing/dh/bluearc/rates/minos-sam04/20090629.week.png> - scratch
- Probable file fragmentation, see data rates for Ntuple files
 - http://www-numi.fnal.gov/computing/dh/bluearc/minos-sam01_20090627.png
 -

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PARROT deployment on Fermigrid

- PARROT has problems with SAM projects, etc
 - Severe problems with I/O intensive activity (like cp1 or cpn)
 - Parrot is designed for CPU limited applications
- We plan to rsync the parrot-accessed files to /grid/fermiapp and /minos/data
- Robert has made the Minos base released relocatable
- I will do the same for the External (UPS) products

